

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PASCAL AGIN and REMI DE MONTGOLFIER

Appeal 2007-1603
Application 10/036,356
Technology Center 2600

Decided: September 13, 2007

Before JAMES D. THOMAS, JOSEPH L. DIXON, and
ST. JOHN COURTENAY III, *Administrative Patent Judges*.
DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the
Examiner's final rejection of claims 17- 27, 29, 31, 32, 34, 37, 41, and 43-50.
We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

Appellants' invention relates to a method for improving performance of a mobile radio communications system using a power control algorithm. An understanding of the invention can be derived from a reading of exemplary claim 17, which is reproduced below.

17. A method for improving performances of a mobile radiocommunication system using a closed-loop power control algorithm, said method comprising, upon the occurrence of a significant change in the required transmit power, performing a step of changing the transmit power according to a corresponding change in the required transmission quality target value.

PRIOR ART

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Tiedemann, Jr.	US 6,137,840	Oct. 24, 2000
Faber	US 6,405,052 B1	Jun. 11, 2002

REJECTIONS

Claims 17-21, 23-27, 29, 31, 32, 34, 37, 41, and 43-50 stand rejected under 35 U.S.C. § 102 as being anticipated by Tiedemann, Jr.

Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Tiedemann, Jr. in view of Faber.

Claims 28, 30, 33, 35, 36, 38-40, and 42 stand objected to by the Examiner as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellants regarding the above-noted rejections, we make reference to the Examiner's Answer (mailed November 2, 2006) for the reasoning in support of the rejections, and to Appellants' Brief (filed November 9, 2005) and Reply Brief (filed December 27, 2006) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellants' Specification and claims, to the applied prior art references, and to the respective positions articulated by Appellants and the Examiner. As a consequence of our review, we make the determinations that follow.

At the outset, we note that claims 26, 29, 31, 34, 36, 37, 41, and 44 have been designated by Appellants as dependent claims depending indirectly from independent claim 17. We find that independent claim 17 is a method claim and each of the above claims is directed to a different statutory class of invention under 35 U.S.C. § 101. We question how these claims can be denominated as dependent claims wherein they do not further limit the parent independent claimed method. Therefore, we view these claims as improper and find it difficult to determine the metes and bounds of each claimed invention. Additionally, we note that claim 36 depends from canceled claim 28.

Additionally, we note that numerous claims contain a single means plus function limitation wherein the Brief does not contain a Summary of Claimed Subject matter for each of the means plus function limitations as

required by 37 C.F.R. § 41.37(c)(1)(v). From our review of the originally filed Specification, we find no corresponding structure for these means plus function limitations beyond a mere recitation of a lookup table. Moreover, for each of the identified claims which recite a single means plus function limitation, the Examiner should consider whether each of these claims is directed to a single means claim. See *In re Hyatt*, 708 F.2d 712, 218 USPQ 195 (Fed. Cir. 1983). We leave it to the Examiner to consider these numerous issues upon further examination, and we decide the appeal solely upon the merits of independent claim 17 and group all claims standing or falling with representative claim 17 since Appellants have not separately argued these claims.

ANTICIPATION

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827, 1830 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

“It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless

inherent in it. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates." *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349, 64 USPQ2d 1202, 1206 (Fed. Cir. 2002) (citations and internal quotation marks omitted). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) (citations and internal quotation marks omitted).

"[A] prima facie case of anticipation [may be] based on inherency." *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986). Once a prima facie case of anticipation has been established, the burden shifts to the Appellant to prove that the prior art product does not necessarily or inherently possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977) ("Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product."). *See also In re Spada*, 911 F.2d 705, 708-09, 15 USPQ2d 1655, 1657-58 (Fed. Cir. 1990).

From our review of the teachings of Tiedemann, Jr., we are in substantial agreement with the Examiner that Tiedemann, Jr. teaches the invention as broadly recited in independent claim 17. While Tiedemann, Jr. does not use the express term "transmission quality target value," we find that Tiedemann, Jr. does teach a method for improving performance of a

radio communication system using a closed-loop power control algorithm. Tiedemann, Jr. teaches that upon the occurrence of a significant change in the required transmit power, performing a step of changing the transmit power according to a corresponding change in the required transmission quality target value. The Examiner maintains that claim 17 does not recite any specific target value that is specific to the claimed invention (Answer 4). We agree with the Examiner that the "required transmission quality target value" is not recited as any specific value that is not taught in the prior art. Appellants merely argue that "required transmission quality target value" is not taught. Therefore, Appellants' argument is not persuasive.

At the outset we note that Appellants' main contention is that Tiedemann, Jr. does not disclose changing the transmit power according to a corresponding change in the required "transmission quality target value." We note that Appellants have not identified any specific definition, nor are we aware of any special definition in the art for this term. From our review of the original Specification, we find no express definition of this term in the Specification or any specific recitation of a numeric value or range in the claim language. Therefore, we give this term its ordinary and customary definition and find that as long as the transmit power is changed according to a set methodology it would be according to a corresponding change in a required transmission quality target value which would be set by the corresponding methodology. Here, we do not find that Appellants have identified an express definition in the Specification for "transmission quality target value," wherein the Specification is directed to the signal to interference ratio or SIR. (Specification 1, ll. 21-26). Therefore we find that

the teachings of Tiedemann, Jr. with respect to considerations of interference are relevant to the power adjustment and signal quality.

Here, we agree with the Examiner that Tiedemann, Jr. discloses various methodologies for changing the transmit power when there is a change in the transmission quality beyond desired upper and lower threshold(s). Clearly Tiedemann, Jr. discloses a recognition of interference with signal transmission as a consideration for power levels for transmission and that the two are interrelated as follows:

In an alternative continuous transmission strategy, if the data rate is less than the predetermined maximum the data is repeated within the frame such that the data occupies the full capacity of the data frame. If such a strategy is employed, power consumption and interference to other users may be reduced during periods of data transmission at less than the predetermined maximum by reducing the power at which the frame is transmitted. This reduced transmission power is compensated by the redundancy in the data stream and can offer benefits in range for a fixed maximum transmission power.

(Tiedemann, Jr. col. 2, l. 61-col. 3, l. 4). (Emphasis added.)

In a code division multiple access (CDMA) communication system, the methods described herein have special significance, because by reducing the transmission power to the minimum necessary for high quality communications, the communication system provides less interference to the transmissions of other users and allows an increase in overall system capacity. In addition, in a capacity limited system, the power reduction of transmission to one user allows another user to transmit at a higher power level which may be necessary due to differences in the propagation path or because that user is transmitting at a higher data rate.

(Tiedemann, Jr., col. 3, ll. 27-38). (Emphasis added.)

In forward link transmissions being broadcast from base station 50 to mobile station 30, it is beneficial to minimize the transmitted power

while maintaining the modem performance. In the exemplary embodiment of a code division multiple access (CDMA) communication system, this minimization of transmission power leaves more power for other channels using the same power amplifier, while reducing interference to other users and systems on the same and near-by frequencies.

(Tiedemann, Jr. col. 10, ll. 46-54). (Emphasis added.) From the above teachings, it is clear that Tiedemann, Jr. teaches the use of a “transmission quality target value” in the adjustment of the transmit power of the system.

With respect to the rejections under 35 U.S.C. §§ 102 and 103, the Examiner incorporates the rejections as set forth in the Final Rejection, mailed April 28, 2004. The Examiner expressly relies upon the teachings of Tiedemann, Jr. as teaching:

a method for improving performance of a mobile radio communication system using a power control algorithm (col. 3, lines 13-17), the method comprising, upon the occurrence of a significant change in the required transmit power (col. 3, lines 20-26), performing the step of changing the transmit power according to a corresponding change in the required transmission quality target value (i.e., transmitting at higher power or lower power due to propagation path, col. 3, lines 27-38 and col. 4, lines 1-28), power control algorithm is an inherent feature of in CDMA system.

(Final Rejection 2).

Here, we agree with the Examiner that the language of independent claim 17 is rather broad. We find the language of independent claim 17 merely sets forth the step of “upon the occurrence of a significant change in the required transmit power, performing a step of changing the transmit power according to a corresponding change in the required transmission quality target value.” We find the Examiner has set forth a reasonable interpretation of the claimed invention as recited in independent claim 17

and set forth how Tiedemann, Jr. teaches the claimed invention. Therefore, we conclude that the Examiner has set forth a sufficient initial prima facie case of anticipation of independent claim 17.

Here, we do not find that Appellants have identified an express definition in the Specification for "transmission quality target value," wherein the Specification is directed to the signal to interference ratio or SIR yet the claim does not use the same language. (Specification 1, ll. 21-26). Therefore, we conclude that the "transmission quality target value" must be broader than this specific SIR and apply the art in this manner.

The Examiner maintains that Tiedemann, Jr. teaches changing power in accordance with the quality of the signal corresponding to a change in signal quality and the power can increase or decrease to improve the quality. The Examiner maintains that:

[w]hen the signal quality in the propagation path deteriorates due to fading conditions, the system detects the change and responds to the change in order to maintain or improve the quality of the signal in the propagation path. It is to be noted that it a change in power requires a change in energy value, as disclosed in col. 8, lines 39-67). Clearly, changing power in accordance to a change in transmission quality is readable on Tiedemann's disclosure."

(Answer 3-4). Appellants argue that the Examiner's reliance upon the propagation path is a reason for changing the transmit power, while Appellants' claimed "according to a corresponding change in the required transmission quality target value" is a way (method) of changing the transmit power. (Br. 11). Appellants go on to argue that while there are different possible ways of changing transmit power, the present invention has for its object one particular method which is not disclosed or suggested by Tiedemann, Jr. and which is a more efficient way of changing the

transmit power "upon the occurrence of a significant change in the required transmit power." (Br. 11). Appellants further argue the disclosed features as recited in the Specification (Br. 11-12).

Appellants then compare various embodiments of Tiedemann, Jr. to the claimed invention and conclude that each is "not the same thing" as "changing the transmit power according to a corresponding change in the required transmission quality target value" and "upon the occurrence of a significant change in the required transmit power" as required by independent claim 17 (Br. 12-15). For each of the comparisons of Tiedemann, Jr. to the claimed invention, Appellants conclude that embodiments of Tiedemann, Jr. are "not the same thing."

Appellants argue at page 14 of the Brief that in particular "setting the power control bits" means working according to the known power control techniques as explained, for example, at Appellants' Specification at page 5 together with Figure 1, and as reiterated above, upon the occurrence of a significant change in the required transmit power, has no drawbacks which are avoided by the present claimed invention. i.e., by "changing the transmit power according to a corresponding change in the required transmission quality target value." Since we find no express limitation in independent claim 17 as to setting the power control bits, we do not find this argument commensurate in scope with Appellants' claimed invention. Therefore, the argument is not persuasive. We cannot agree with Appellants' arguments which rely upon distinction with the disclosed invention rather than the clear language of independent claim 17 and dependent claims 18-21, 23-27, 29, 31, 32, 34, 37, 41, and 43-50 which have not been separately argued by Appellants.

Obviousness

With respect to the dependent claim 22, Appellants argue that the combination of Faber and Tiedemann, Jr. would not render the subject matter of claim 22 prima facie obvious. We do not find this to be a specific argument for patentability, and we will sustain the rejection of dependent claim 22.

CONCLUSION

To summarize, we have sustained the rejection of claims 17-21, 23-27, 29, 31, 32, 34, 37, 41, and 43-50 under 35 U.S.C. §102, and we have sustained the rejection of claim 22 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

tdl/ce

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON DC 20037-3213